

**Listing of Claims:**

1. (Currently Amended) An organic light emitting diode (OLED) with at least one active, light emitting organic layer which has refractive index inhomogeneities;

wherein the organic layer has at least one first partial region with a first refractive index and ~~at least one~~ a plurality of second partial region regions with a second refractive index which ~~is comprise organic material and have~~ different from the first refractive indices index, and the said second partial regions form a forming irregularly arranged refractive index inhomogeneities in the organic layer with a composite like structure.

2. (Previously presented) The OLED as claimed in claim 1, wherein the different partial regions are formed by separation of the applied layer material.

3. (Previously presented) The OLED as claimed in claim 1, wherein the organic layer has charge carrier transport material and/or emitter material.

4. (Previously presented) The OLED as claimed in claim 1, wherein the organic layer has electrically inactive material.

5. (Previously presented) The OLED as claimed in claim 1, wherein the organic layer has at least two polymers with different refractive indices.

6. (Previously presented) The OLED as claimed in claim 1, wherein the first and second partial regions are produced in a layer made from a single type of a plastics material by means of local variation of a chemical and/or physical property.

7. (Previously presented) The OLED as claimed in claim 6, wherein the layer made from a single type of plastic material is an amorphous layer, said amorphous layer forming the first partial region and second partial regions are crystalline regions within said amorphous layer.

8. (Previously presented) The OLED as claimed in claim 6, wherein the locally varying property is at least one of the properties degree of crosslinking, degree of branching density and copolymerization.

9. (Currently Amended) A method for producing an organic light emitting diode (OLED) with at least one active, light emitting organic layer which has refractive index inhomogeneities;

wherein the material of the organic layer is applied to a carrier in such a way that, during or after a coating step, at least one first partial region with a first refractive index and ~~at least one~~ a plurality of second partial regions with a second refractive index ~~region~~ form in the layer, said second refractive index of the second partial regions being regions having different from the first refractive index indices, and ~~the said second partial regions form a~~ forming irregularly arranged refractive index inhomogeneities in the organic layer with a composite-like structure.

10. (Previously presented) The method as claimed in claim 9, wherein the partial regions are formed by a separation process in a forming polymer layer from a mixture of soluble or dispersible polymers or monomers, in which at least two phases are produced.

11. (Previously presented) The method as claimed in claim 9, wherein charge carrier transport material and/or emitter material is used for the organic layer.

12. (Previously presented) The method as claimed in claim 9, wherein electrically inactive material is used for the organic layer.

13. (Previously presented) The method as claimed in claim 10, wherein the separation of the polymers is brought about by the removal of a solvent or a dispersant.

14. (Previously presented) The method as claimed in claim 10, wherein the separation of the polymers is caused by a separation of at least two solvents in which the at least two polymers are dissolved.

15. (Previously presented) The method as claimed in claim 10, wherein the separation of the polymers is caused by a separation of at least two dispersants in which the at least two polymers are dispersed.

16. (Previously presented) The method as claimed in claim 10, wherein the at least two different polymers are formed in the organic layer only during the coating method or thereafter by polymerization.

17. (Currently Amended) An organic light-emitting diode (~~OLED~~) (OLED) with at least one active, light-emitting layer which has refractive index inhomogeneities[[,]] ~~the light-emitting layer comprising a first matrix material and at least two partial regions of a second material which are embedded in the matrix material;~~

wherein the organic layer has at least one first partial region with a first refractive index and a plurality of the second partial regions with material has a second refractive index which is different from the first refractive index, said second partial regions having different sizes and forming refractive index inhomogeneities in the organic layer ~~matrix material.~~

18. (Currently Amended) The OLED as claimed in claim ~~17~~ 25, wherein the matrix material is an active, light-emitting material and the regions of the second material form scattering centers in the matrix material.

19. (Previously presented) The OLED as claimed in claim 18, wherein the matrix material is PPV.

20. (Previously presented) The OLED as claimed in claim 18, wherein the second material is PVK.

21. (Currently Amended) The OLED as claimed in claim ~~17~~ 25, wherein the active light-emitting layer comprises one-third PPV and two-thirds PVK.

22. (Currently Amended) The OLED as claimed in claim ~~17~~ 25, wherein the active, light-emitting layer comprises one half PPV and one half PVK.

23. (Currently Amended) The OLED as claimed in claim ~~17~~ 25, wherein the regions of the second material are sphere shaped.

24. (Currently Amended) The OLED as claimed in claim ~~23~~ 25, wherein at least one region of the second material is completely surrounded by the matrix material.

25. (New) The OLED as claimed in claim 17, wherein the first partial region is formed by a first matrix material and the plurality of second partial regions are formed by a second material.